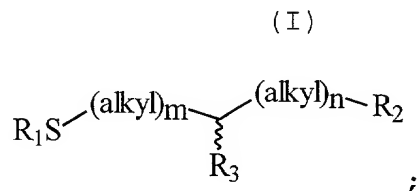


What Is Claimed Is:

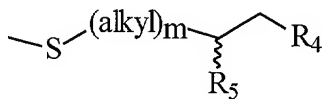
1. A method of treating a patient for radiation exposure,
said method comprising administering to the patient an effective
5 amount of a compound of formula I:



wherein:

R₁ is hydrogen, lower alkyl, a sulfur-containing amino acid

or



R₂ and R₄ are each individually SO₃⁻M⁺, PO₃²⁻M₂²⁺, or PO₂S²⁻

M₂²⁺;

R₃ and R₅ are each individually hydrogen, hydroxy or
15 sulfhydryl, where if R¹ is hydrogen, R³ is not sulfhydryl;

m and n are individually 0, 1, 2, 3 or 4, with the proviso
that if m or n is 0, then R₃ is hydrogen; and

M is hydrogen or an alkali metal ion; or

a pharmaceutically acceptable salt thereof.

2. The method of Claim 1 wherein the effective amount of the formula I compound administered is from 0.1 mg/kg of body weight to 1,000 mg/kg of body weight.

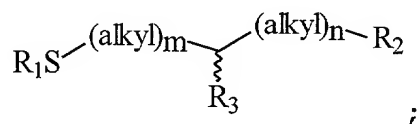
5

3. The method of Claim 1 wherein the compound is administered orally.

4. The method of Claim 1 wherein the compound is administered parenterally.

5. A method of prophylactically treating a patient about to undergo radiation therapy, said method comprising administering to the patient prior to beginning a radiation therapy session, an effective amount of a compound of formula I:

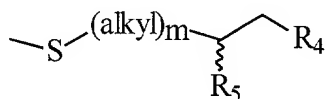
(I)



wherein:

R_1 is hydrogen, lower alkyl, a sulfur-containing amino acid

20 or



R₂ and R₄ are each individually SO₃⁻M⁺, PO₃²⁻M₂²⁺, or PO₂S²⁻M₂²⁺;

R₃ and R₅ are each individually hydrogen, hydroxy or sulfhydryl, where if R¹ is hydrogen, R³ is not sulfhydryl;

5 m and n are individually 0, 1, 2, 3 or 4, with the proviso that if m or n is 0, then R₃ is hydrogen; and

M is hydrogen or an alkali metal ion; or

a pharmaceutically acceptable salt thereof.

6. The method of Claim 5 wherein the effective amount of the formula I compound to be administered is 500 mg/m² to 40g/m².

7. The method of Claim 5 wherein the formula I compound is administered to the patient at 15 minutes to 1 hour prior to
15 beginning the radiation therapy session.

8. The method of Claim 5 wherein administration is by intravenous infusion.

20 9. The method of Claim 5 wherein administration is oral.

10. The method of Claim 5 wherein an additional effective dose of formula I compound is administered about 2 hours after conclusion of the radiation therapy session.

5 11. The method of Claim 10 wherein additional effective doses are administered to the patient about every 4 hours after the first-mentioned additional effective dose.

12. The method of Claim 10 wherein the additional effective dose is administered orally.

13. The method of Claim 10 wherein the additional effective dose is administered by intravenous infusion.